

# CETACEAN STRANDINGS IN THE AEGEAN AND MEDITERRANEAN COASTS OF TURKEY

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## Abstract

Cetacean fauna on the Turkish coast of the Aegean and Mediterranean seas has little been studied. To elucidate the cetacean fauna in the area, we compiled the cetacean stranding data during 1990-1997 on the Turkish coasts of the Aegean and Mediterranean seas. A total of 23 stranded cetacean was recorded. Those were (number of individuals): *Tursiops truncatus* (9), *Stenella coeruleoalba* (7), *Ziphius cavirostris* (3), *Delphinus delphis* (2), *Physeter catodon* (1), and *Pseudorca crassidens* (1).

**Key-words:** cetacean, Eastern Mediterranean

Turkey has a long coastline along the Aegean and Mediterranean Seas. However, not much effort has been made to understand the cetacean fauna there and little information is available so far (1, 2, 3). Cetacean fauna can be investigated by studying accidentally caught and stranded animals as well as by direct observation of live animals at sea and from land. The present study was made preliminarily to elucidate the cetacean fauna on the Turkish coast of the Aegean Sea and Mediterranean Sea by compiling the information on strandings.

The present study was made on the Turkish coasts of the Aegean and Mediterranean Seas, from the western end of the Çanakkale Strait in the north to the Syrian border in the east (Fig. 1) from January 1990 to April 1997. Stranded specimens were collected and identified. Fresh specimens were measured, the sex was identified and photos were taken. As a total, 23 strandings were recorded (Table 1). This number is small in spite of the seven years of study period and the long coastline of the Aegean and Mediterranean Seas. We assume that many of the strandings were not reported. Thus the result and conclusion presented here are considered to be only preliminary.

The most common stranding species was *Tursiops truncatus* (9 individuals), followed by *Stenella coeruleoalba* (7 individuals). *Ziphius cavirostris*, *Delphinus delphis*, *Pseudorca crassidens*, and *Physeter catodon* were rare. Marini *et al.* (4) reported that the most frequently encountered species was *T. truncatus* followed by *S. coeruleoalba* in the Aegean Sea. Assuming that the stranding data reflect the fauna partly, if not fully, the present result agrees with Marini *et al.* (4) as well as the strandings in the Hellenic Seas (5). Beside those reported here, as a member of the cetacean fauna in the Turkish waters, *Balaenoptera physalus* should also be included since one specimen stranded in Antalya in 1971 (3). Some other species, such as *Grampus griseus* and *Globicephala malaena*, which can be seen in the Turkish Mediterranean Sea (2,3), were not reported here.

No seasonal trend nor distributional trend was observed, probably due to the small sample size. The Aegean and Mediterranean coasts of Turkey are crowded with many tourists during summer, thus one can assume that the chance of finding strandings is higher compared to quiet winter months, if there is no seasonal trend. However, we did not see any peak of strandings in summer. It possibly means that there may be more strandings during off-touristic season. However, the sample size is too small to make conclusion here.

In 1990-1991, the epizootic affected *S. coeruleoalba* in the Mediterranean, which resulted in mass die-offs of this species (6), followed by the second outbreak in 1991-1992 (7). Many strandings were reported in all Mediterranean countries, including Greece, which shares the Aegean Sea with Turkey (5). On the Turkish coast, we identified no stranding of *S. coeruleoalba* during that period, except one specimen in Karaburun and another one in Sifne in 1993, after the outbreak. However, some local source indicated that there were about 20 strandings of *S. coeruleoalba* in 1992 in Kusadasi in the Central Aegean Sea (unpublished data). We could not confirm this strandings by ourselves, as we learned this information in 1993, this could be the evidence of the effect of the epizootic, as mentioned by Aguilar and Borrell (7) and Visser *et al.* (8). Except this information, no other mass die-offs were reported. This may be due to the low survey effort or the effect was not so strong as in the other Mediterranean countries such as Spain, Italy and Greece.

The present study agreed to the fundamental composition of the cetacean fauna of the Aegean and Mediterranean seas, however it points out the necessity to establish a national cetacean stranding network along the coastline of Turkey and also to educate volunteers to cover wider areas on the Turkish coastline and to collect more systematic and reliable data on species identification as well as other biological parameters.

Table 1. List of strandings along the Turkish coasts of the Aegean and Mediterranean Seas in 1990-1997.

Species	B.L. (cm)	Sex	Place*	Year	Month
<i>Stenella coeruleoalba</i>	-	-	Davutlar(A)	1990	Jan
<i>Physeter catodon</i>	525	-	Seferihisar(A)	1990	Jan
<i>Tursiops truncatus</i>	230	M	Mordogan(A)	1990	Jan
<i>Stenella coeruleoalba</i>	-	-	Kusadasi(A)	1990	Mar
<i>Delphinus delphis</i>	224	-	Cesme(A)	1991	-
<i>Tursiops truncatus</i>	238	F	Foca(A)	1992	Sep
<i>Stenella coeruleoalba</i>	-	-	Cesme(A)	1993	Feb
<i>Tursiops truncatus</i>	286	-	Kemer(M)	1993	May
<i>Stenella coeruleoalba</i>	-	-	Karaburun(A)	1993	Jul
<i>Tursiops truncatus</i>	268	-	Karatas(M)	1993	Aug
<i>Stenella coeruleoalba</i>	180	M	Gokceada(A)	1994	Jul
<i>Ziphius cavirostris</i>	800	-	Serik(M)	1994	Jul
<i>Pseudorca crassidens</i>	390	F	Urla Port(A)	1995	Jan
<i>Tursiops truncatus</i>	-	-	Behramkale(A)	1995	Mar
<i>Stenella coeruleoalba</i>	-	-	Marmaris(A)	1995	Apr
<i>Ziphius cavirostris</i>	-	-	Oren(A)	1995	Jun
<i>Delphinus delphis</i>	-	-	Turgutreis(A)	1995	Jun
<i>Stenella coeruleoalba</i>	187	M	Karatas(M)	1996	May
<i>Tursiops truncatus</i>	245	F	Iskenderun(M)	1996	-
<i>Tursiops truncatus</i>	-	-	Alanya(M)	1996	-
<i>Tursiops truncatus</i>	-	-	Fethiye(A)	1996	-
<i>Tursiops truncatus</i>	219	-	Narlidere(A)	1997	Apr
<i>Ziphius cavirostris</i>	610	M	Dalyan(A)	1997	Apr

Place\*: (A)-Aegean Sea coast, (M)-Mediterranean Sea coast

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## References

- 1 - Marchessaux D., 1980. A review of the current knowledge of the cetaceans in the Eastern Mediterranean Sea. *Vie Marine*, 2: 59-66.
- 2 - Öztürk B., 1995. Marine mammals inventory of Turkey. In: European Research on Cetaceans - 9, Evans P.G.H., Nice, H., eds., Kiel, Germany: 96-98.
- 3 - Öztürk B., 1996. Whales and Dolphins. Anahtar Publ., Istanbul: 119p. (In Turkish.)
- 4 - Marini L., Carpentieri P., Consiglio C., 1995. Presence and distribution of the cetological fauna of the Aegean Sea: Preliminary results. In: European Research on Cetaceans - 9, Evans P.G.H., Nice, H., eds., Kiel, Germany: 99-101.
- 5 - Frantzis, A., 1997. Cetaceans and cetology in the Hellenic Seas. In: European Research on Cetaceans - 10, Evans P.G.H., ed., Kiel, Germany: 114-118.
- 6 - Aguilar A., Raga J. A., 1993. The striped dolphin epizootic in the Mediterranean Sea. *Ambio*, 22(8): 524-528.
- 7 - Aguilar A., Borrell A., 1994. Abnormally high polychlorinated biphenyl levels in the striped dolphins (*Stenella coeruleoalba*) affected by the 1990-1992 Mediterranean epizootic. *The Science of the Total Environment*, 154: 237-247.
- 8 - Visser I. K. G., van Bresse M. F., Barrett T., Osterhaus A. D. M. E., 1993. Morbillivirus infections in aquatic mammals. *Vet. Res.*, 24: 169-178.